

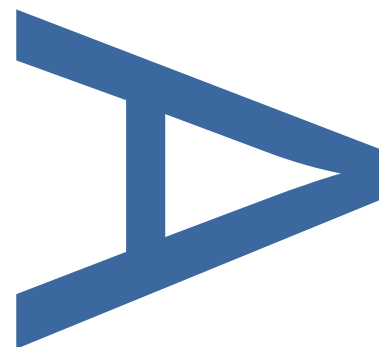
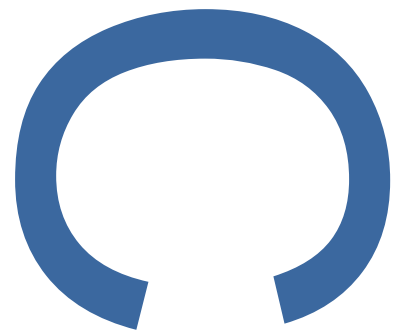
**WESTMINSTER ABBEY GREAT
CLOISTERS,
LONDON SW1P 3PA**

**A SUMMARY OF A WATCHING BRIEF ON
THE EXCAVATION FOR A NEW
MANHOLE**

PCA REPORT NO: R12911

SITE CODE: WMN17

JUNE 2017



PRE-CONSTRUCT ARCHAEOLOGY

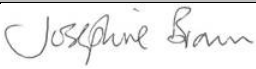

DOCUMENT VERIFICATION

WESTMINSTER ABBEY GREAT CLOISTERS,
LONDON SW1P 3PA

A SUMMARY OF A WATCHING BRIEF ON THE
EXCAVATION FOR A NEW MANHOLE

Quality Control

Pre-Construct Archaeology Ltd		
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WESTMINSTER ABBEY GREAT CLOISTERS, LONDON SW1P 3PA

A SUMMARY OF A WATCHING BRIEF ON THE EXCAVATION FOR A NEW MANHOLE

By James Langthorne, Pre-Construct Archaeology Limited, 08 June 2017

Site Code: WMN17

1 INTRODUCTION

- 1.1 An excavation to facilitate the installation of a new manhole chamber was carried out in the south-west corner of the Cloister Garth within Westminster Abbey between 31st January and 9th February 2017. The investigation was centred at TQ 530034 179447 (Figures 1 & 2). The work was subject to a Watching Brief conducted initially by Wayne Perkins and latterly by the author.
- 1.2 The excavation of a single trench, Trench 1, was necessary to access and repair a failed stormwater drain which was causing flooding within the Cloisters and the garth itself. The final dimensions of excavation were 1.85m north-south by 2.17m east-west and a maximum depth of 2.09m (Figure 3). It was excavated by hand and the location of the excavation and levels within it were extrapolated from map detail¹.
- 1.3 PCA were commissioned for the work by The Dean and Chapter of Westminster Abbey. The project was managed for PCA by Chris Mayo.

2 ARCHAEOLOGICAL RESULTS

2.1 Phase 1: Natural

- 2.1.1 The earliest deposit found during the excavation was naturally deposited, loose, mid orange brown sand [5] (Figures 3 & 4). It was encountered at a maximum height of 2.92m OD. A small sondage, approximately 0.25m square by 0.40m deep, was dug into the base of the trench in order to confirm the naturally deposited character of the sand (Figure 3).

2.2 Phase 2: Medieval

- 2.2.1 Natural sand [5] was overlain by a 0.40m-thick layer of subsoil [4]. Subsoil [4] was described as being fairly loose, mid-dark grey, slightly silty sand with very occasional CBM and oyster shell flecks and fragments and was found at heights between 3.15-3.20m OD.
- 2.2.2 Truncating subsoil [4] in the southern part of the excavation was a construction cut [13] within which lay an east-west orientated, trench-built wall foundation [11] (Figures 3 & 4). Foundation [11] was constructed principally of fairly large, worked sub-rectangular blocks of ragstone and

¹ Price & Myers 01/02/2017. "Below Ground Drainage Layout Stage 2", Drawing no. 25794-602 Ver 3

chalk with occasional fragments of Reigate stone. With the exception of its northern face, access to wall foundation [11] was restricted due to the presence of later ceramic pipes and the remnants of a concrete inspection chamber that was situated immediately above the foundation. However it was possible to record that the wall was present to a maximum height of 3.58m OD, it stretched 1.83m east-west and reached a maximum depth of 0.56m. Wall foundation [11] was considered to either be a hitherto unknown 11th century wall foundation or part of the foundation for the current cloisters and therefore 13th-14th century in date (W Rodwell 9/2/2017 *pers. comm.*).

- 2.2.3 Subsoil [4] was also cut in the western section of the trench by construction cut [14] that contained a wall composed of exposed wall core material [10] and ashlar blocks of ragstone, or possibly Caen stone surmounted by Reigate stone [8] (Figure 4). The rubble infill material [10] seemed to be composed of unworked chalk and fairly sandy lime mortar; the wall core extended 1.02m north-south, was 0.72m deep and seen at a maximum height of 3.53m OD. Wall core [10] appeared to be surmounted by wall [8] although due to the position of later intrusions impacting on the east facing section this could not be confirmed. The aspects of wall [8] that could be observed consisted of two courses of ashlar Caen stone or ragstone blocks that were each more than 700mm in length, over 250mm wide and were almost 138mm thick. No mortar was evident between the joints of the stonework although a damaged fragment of Reigate stone was seen to cap wall [8]. As seen in the excavation wall [8] extended 1.20m north-south by 0.25m east-west and was 0.67m deep, it reached a maximum height of 4.29m OD.
- 2.2.4 It was also considered possible that wall foundation [11] was an east-west return of wall [8]/[10], perhaps forming part of an earlier arcade. However due to the restricted nature of the trench it was not possible to prove the relationship between the three masonry elements or the function of their original structure(s).
- 2.2.5 Sealing subsoil [4] was a loose, 0.14m-thick layer of light yellowish brown sandy mortar with occasional pea grit and CBM flecks [3] (Figure 4). Reaching heights between 3.37-3.40m OD, this mortar layer may have been a temporary work surface, similar to those found in other parts of Westminster Abbey such as The Cellarium² and Poets' Corner Yard³. No dating material was recovered from this deposit and therefore it is uncertain whether surface [3] was of medieval or post-medieval date, although previous mason's floors have been predominantly 13th and late 14th century in date (P Jorgensen *pers comm*).

2.3 Phase 3: Post-Medieval

- 2.3.1 Mortar surface [3] was overlain by a small remnant of a possible brick floor surface [12] in the northern part of the trench. Measuring only 0.24m north-south by 0.35m east-west, by 70mm

² Jorgensen, P. 2013. 'An Archaeological Excavation of the Cellarium and Adjacent Spaces, Westminster Abbey, London', PCA unpublished report number R11529

³ Jorgensen, P. 2012. 'Poets' Corner Yard, Westminster Abbey: An Archaeological Evaluation', PCA unpublished report number R11323

thick, it was constructed of re-used type 3039 brick and light grey, loose sandy mortar with frequent gritty inclusions. It dated from the second half of the 16th century into the 18th century. The masonry fragment was seen at a maximum height of 3.45m OD.

2.3.2 All deposits were subsequently backfilled by a 0.58m-thick layer of fairly firm, mid-dark brownish grey silty sand [2] with occasional-moderate pea grit and small angular, sub-angular and sub-rounded pebbles and occasional oyster shell and CBM fragments. Animal bone recovered from the layer appeared to be waste from the abbey kitchens. The few pottery fragments recovered suggested a date for the deposit from the last half of the 16th century into the 17th century, however a network of large concrete coated ceramic pipes marked 'DOULTON' that ran through made ground [2] were considered to have probably originally dated from the late 18th century into the mid-19th century; this indicated that layer [2] had been reworked (Figures 3 & 4). Made ground [2] reached a maximum height of 3.97m OD.

2.3.3 The date of the ceramic pipes would have been contemporary with two further masonry remnants, [6] and [7], seen in the east facing section of the trench (Figure 4). These wall foundations were constructed of red brick and concreted yellow grey slightly sandy mortar with occasional-moderate gritty inclusions, and they appeared to co-opt wall [8] directly below them as a further foundation. Walls [6] and [7] were considered to be parts of a toilet block dating from the 18th century (*W Rodwell 9/2/2017 pers. comm.*) The dimensions of both walls are summarised in the table below:

Context	Orientation	Length	Width	Depth	Max. Height
6	NE-SW	0.24m	Not observed, wall seen in section only	0.43m	4.37m OD
7	E-W	0.23m	Not observed, wall seen in section only	0.18m	4.32m OD

2.4 Phase 4: Modern

2.4.1 All deposits were sealed below a 0.48m-thick layer [1] of fairly compact dark blackish brown slightly clay sandy silt with frequent CBM, mortar and concrete flecks and fragments, moderate root activity and very occasional oyster shell fragments. Plastic pipes were seen to truncate this layer of garden soil as did the modern late 20th –early 21st century concrete inspection chamber that was broken out in order to facilitate the installation of the new manhole chamber. Garden soil [1] was recorded at heights between 4.52-4.56m OD.

Plate 1: West facing view of Manhole Excavation



Plate 2: South facing view of Manhole Excavation showing wall foundation [11] beneath post-medieval ceramic pipes within layer [2].



Plate 3: South facing view of detail of masonry of wall foundation [11]



Plate 4: North-west facing view of post-medieval walls [6] and [7] and medieval wall [8]



Plate 5: West facing view of detail of masonry of medieval wall [8]



3 CONCLUSIONS

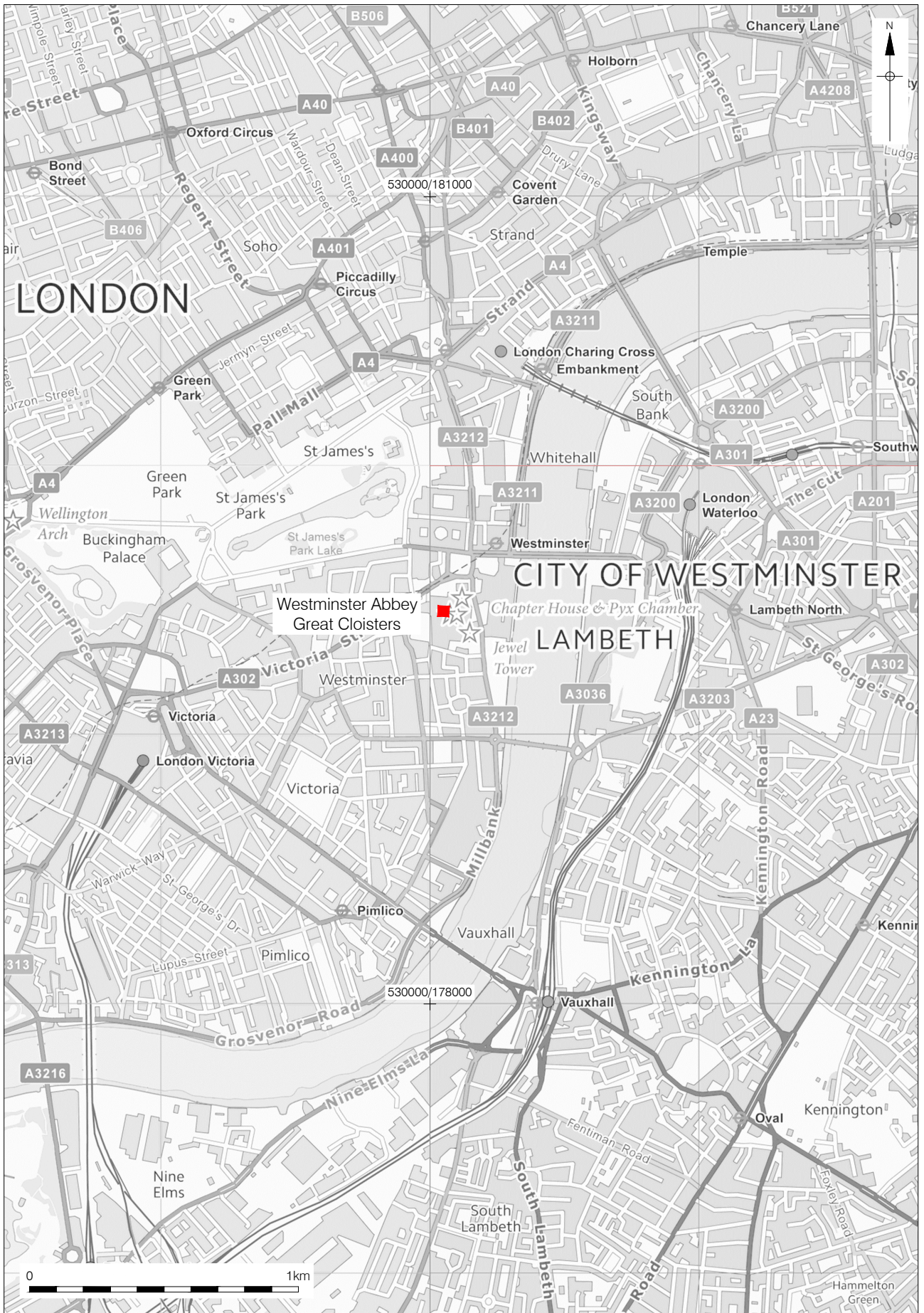
- 3.1 Natural sand was encountered at the base of the trench at heights between 2.87m OD and 2.92m OD and, with the exceptions of the medieval walls [10] and [11] to the west and south respectively, appeared to be relatively untruncated.
- 3.2 The levels atop the sand which have been recorded in the vicinity vary markedly: during the excavations in the Cellarium to the south-west of the site, the sand was recorded between 1.35 and 1.29m OD⁴, whereas excavations within Dean's Yard to the west of the site found the sand at around 0m OD⁵. These marked variations reflect the uneven topography of the superficial geology atop Thorney Island, dropping from 2.92m OD in the Cloister Garth to around 0m OD only around 100m to the west, at the northwest corner of Dean's Yard.
- 3.3 The principal archaeological features encountered were the medieval walls [8], [10] and [11] which may all have been a corner of the same structure, possibly an arcade, although wall [11] does also have the potential to be a foundation for one the buttresses that currently form part of the Great Cloisters.
- 3.4 Further features were also uncovered of a later, post-medieval date including a fragment of a brick floor [12], and the pipes and wall foundations [6] and [7] relating to an 18th century toilet block. There was also a medieval or post-medieval temporary mortar floor surface [3].
- 3.5 Despite the impact of a modern concrete inspection chamber, the archaeological remains within Trench 1 were remarkably well preserved and the medieval walls have been left in situ. It is hoped that any future excavations within this area of the garth and Cloisters will be able to further illuminate the function and extent of the structures found during this archaeological watching brief.

4 ACKNOWLEDGEMENTS

- 4.1 Pre-Construct Archaeology Limited would like to thank the Dean and Chapter of Westminster Abbey for commissioning the work. We particularly thank Warwick Rodwell for his advice and experience, Iain MacDonald of Bakers of Danbury Limited for facilitating the work on site and the Bakers of Danbury team for all their hard work excavating the trench.
- 4.2 The author would like to thank Wayne Perkins for his initial work on the watching brief, Mark Roughley for the figures, Kevin Rielly for assessing the animal bone, Chris Jarrett for assessing the pottery, Amparo Valcarcel for assessing the building material samples and Chris Mayo for his project management and editing this report.

⁴ Jorgensen, P. 2013. 'An Archaeological Excavation of the Cellarium and Adjacent Spaces, Westminster Abbey, London', PCA unpublished report number R11529, p25

⁵ Jorgensen, P. 2010 'Assessment of an Archaeological Excavation in the Northwest Corner of Dean's Yard, Westminster Abbey, City of Westminster', PCA unpublished report, p17



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20/02/17 MR

Figure 1
 Site Location
 1:20,000 at A4

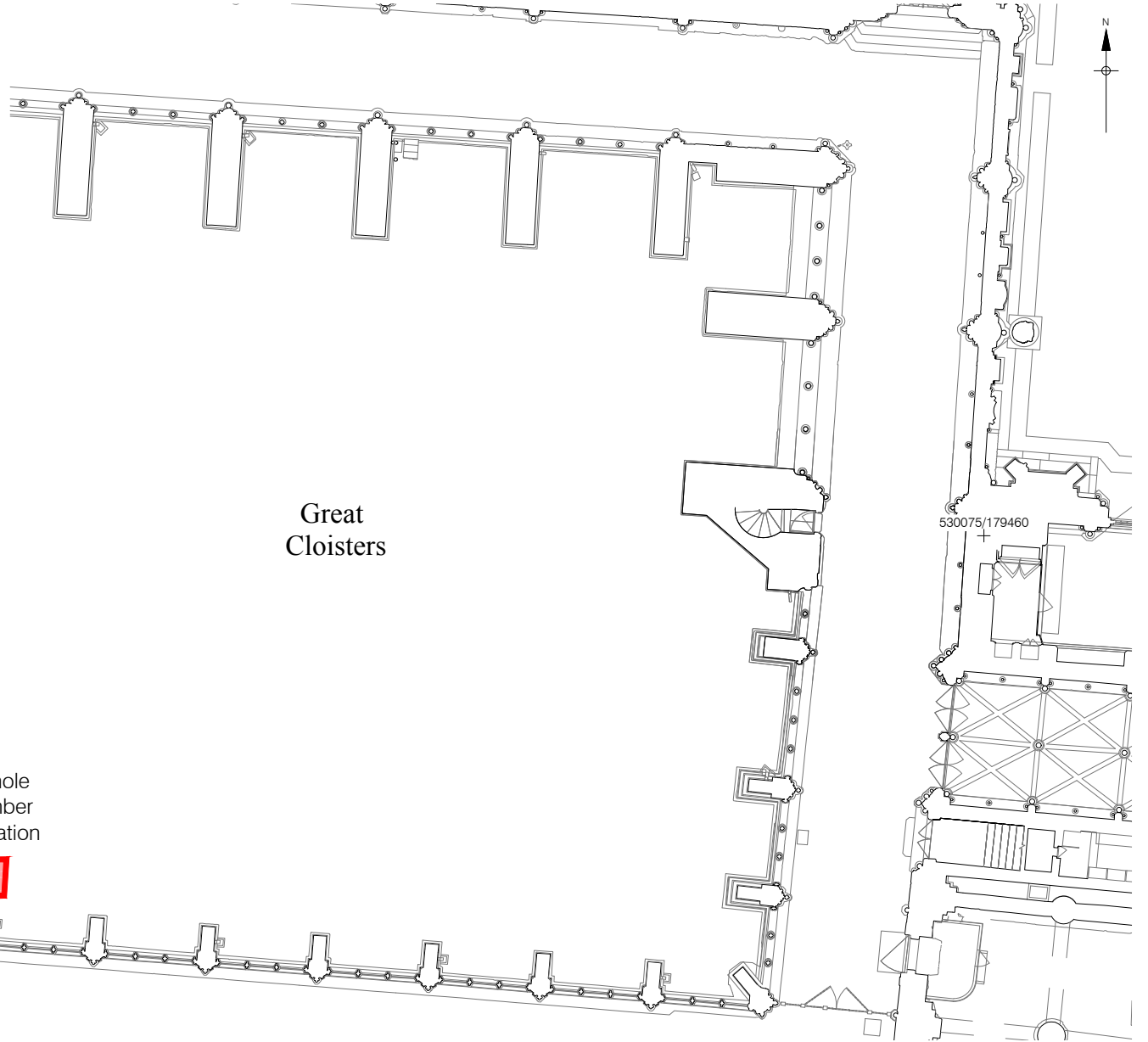
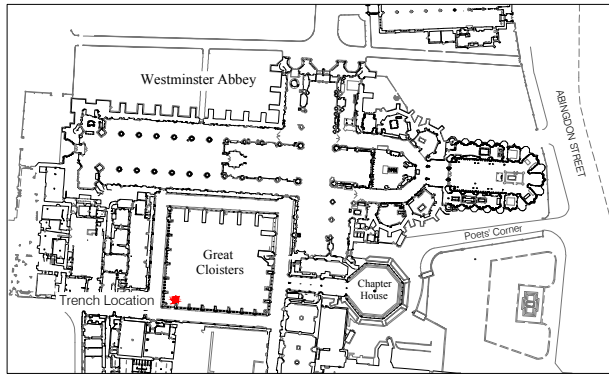
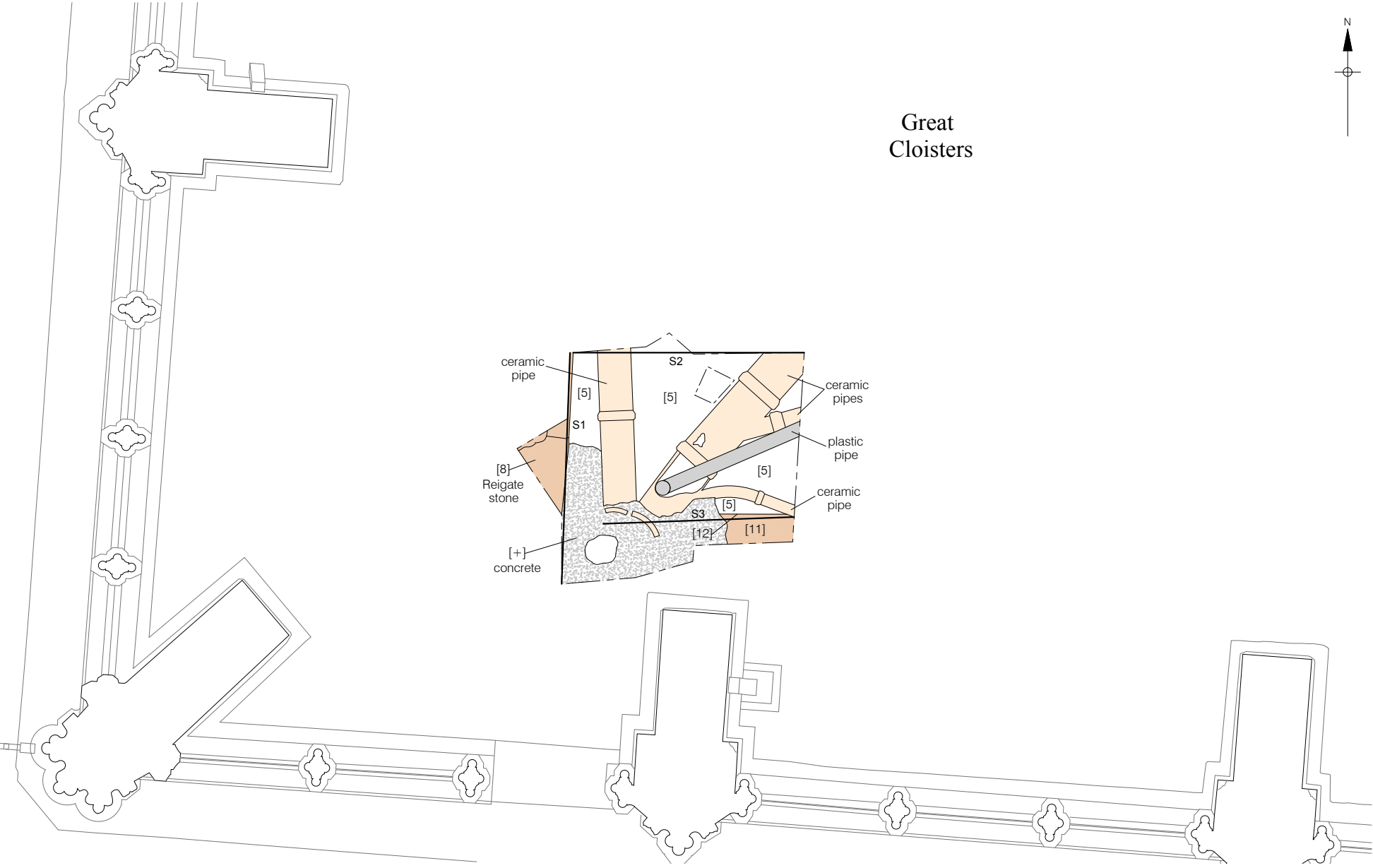


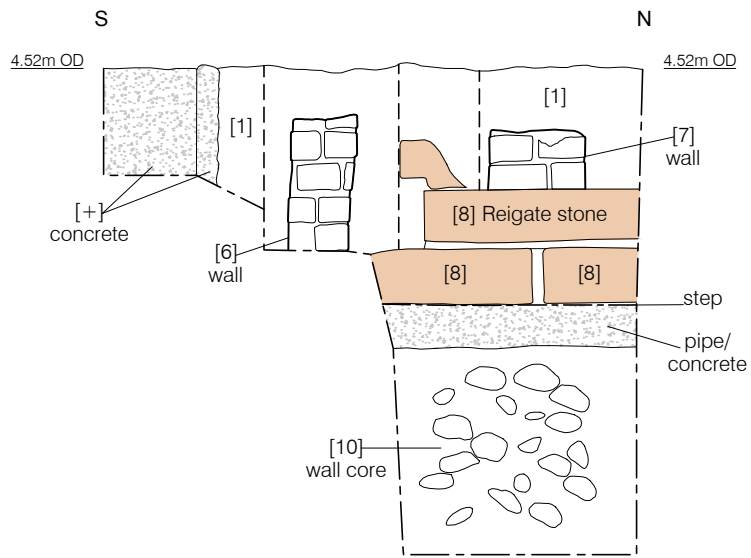
Figure 2
Detailed Site and Trench Location
1:250 at A4

Great Cloisters

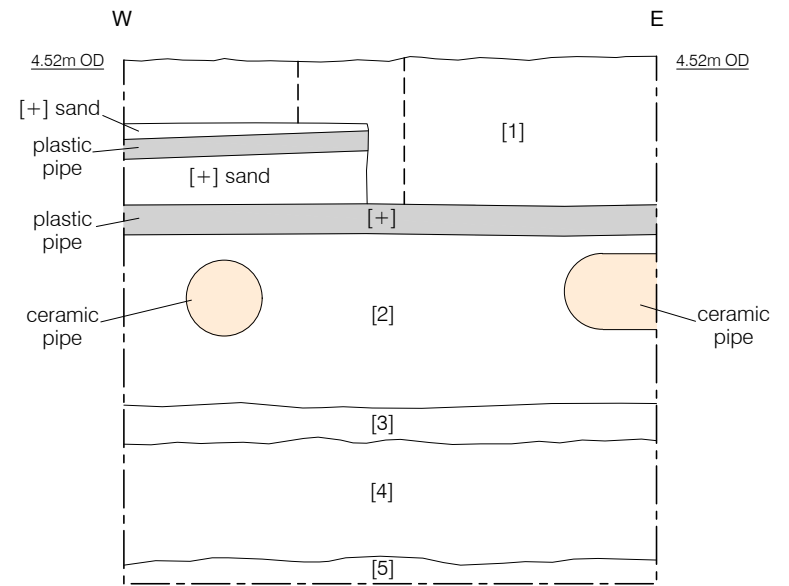


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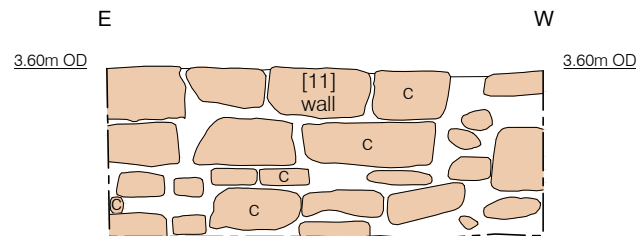
Figure 3
Plan of Manhole Chamber Excavation
1:40 at A4



Section 1
East facing



Section 2
South facing



Section 3
North facing

c = chalk



5 APPENDIX 1: OASIS REPORT FORM

OASIS ID: preconst1-276797

Project details

Project name	A Watching Brief on a Manhole Excavation within the Great Cloisters, Westminster Abbey, London SW1P 3PA
Short description of the project	A watching brief was carried on an excavation to facilitate the installation of a new manhole chamber. The excavation was located in the south-west corner of the Great Cloisters within Westminster Abbey. 3.1 Natural sand was encountered at the base of the trench at heights between 2.87m OD and 2.92m OD and, with the exceptions of the medieval walls [10] and [11] to the west and south respectively, appeared to be relatively untruncated. The principal archaeological features encountered were medieval walls which may all have been a corner of the same structure, possibly an arcade, although one wall does also have the potential to be a foundation for one the buttresses that currently form part of the Great Cloisters. Further features were also uncovered of a later, post-medieval date including a fragment of a brick floor, and the pipes and wall foundations relating to an 18th century toilet block. There was also a medieval or post-medieval temporary mortar floor surface. Despite the impact of a modern concrete inspection chamber, the archaeological remains within the trench were remarkably well preserved and the medieval walls have been left in situ.
Project dates	Start: 31-01-2017 End: 09-02-2017
Previous/future work	Yes / Yes
Any associated reference codes	project WMN17 - Sitecode
Type of project	Recording project
Site status	World Heritage Site
Current Land use	Community Service 1 - Community Buildings
Monument type	WALLS Post Medieval
Monument type	CERAMIC PIPES Post Medieval
Monument type	WALLS Medieval
Monument type	CONCRETE INSPECTION CHAMBER Modern
Monument type	TEMPORARY WORK SURFACE Medieval
Monument type	TEMPORARY WORK SURFACE Post Medieval
Monument type	FLOOR Post Medieval
Monument type	MADE GROUND Post Medieval
Monument type	MADE GROUND Modern
Monument type	SUBSOIL Uncertain
Monument type	NATURAL SAND None
Significant Finds	ANIMAL BONE Post Medieval
Significant Finds	POTTERY Post Medieval
Significant Finds	CBM Post Medieval
Investigation type	"Watching Brief"
Prompt	Voluntary/self-interest

Project location

Country	England
Site location	GREATER LONDON CITY OF WESTMINSTER WESTMINSTER Watching Brief on Manhole Excavation in the Great Cloisters, Westminster Abbey
Postcode	SW1P 3PA
Study area	5 Square metres
Site coordinates	TQ 530034 179447 50.940042736886 0.177992918401 50 56 24 N 000 10 40 E Point
Lat/Long Datum	Unknown
Height OD / Depth	Min: 2.87m Max: 2.92m

Project creators

Name of Organisation	Pre-Construct Archaeology Limited
Project brief originator	Consultant

Project design originator	Chris Mayo
Project director/manager	Chris Mayo
Project supervisor	James Langthorne
Type of sponsor/funding body	Landowner
Name of sponsor/funding body	The Dean and Chapter of Westminster Abbey
Project archives	
Physical Archive recipient	Westminster Abbey Museum
Physical Archive ID	WMN17
Physical Contents	"Animal Bones","Ceramics"
Digital Archive recipient	Westminster Abbey Museum
Digital Archive ID	WMN17
Digital Contents	"Stratigraphic"
Digital Media available	"Images raster / digital photography","Images vector","Spreadsheets","Text"
Paper Archive recipient	Westminster Abbey Museum
Paper Archive ID	WMN17
Paper Contents	"Stratigraphic"
Paper Media available	"Context sheet","Map","Matrices","Plan","Report","Section"
Project bibliography 1	
Publication type	Grey literature (unpublished document/manuscript)
Title	A summary of the Watching Brief on the Manhole Excavation within the Great Cloisters, Westminster Abbey
Author(s)/Editor(s)	Langthorne, J.
Other bibliographic details	PCA R12911
Date	2017
Issuer or publisher	Pre-Construct Archaeology Limited
Place of issue or publication	London
Description	A4 grey literature report with PCA covers
Entered by	Chris Mayo (cmayo@pre-construct.com)
Entered on	07-Jun-17

6 APPENDIX 2: ANIMAL BONE REPORT

By Kevin Rielly, Pre-Construct Archaeology Limited

6.1 Description of the bones

6.1.1 A total of 23 animal bones were recovered (see Table 1) from deposit (2), this dated between the late 16th and the early 17th centuries. The bones were minimally fragmented and generally in good condition, although there are a small number (2 fragments) which are less well preserved, perhaps indicative of some redeposition. This collection is largely composed of bones belonging to the three major domesticates – cattle, sheep/goat and pig, with some cattle-size bones (ribs and limb bone fragments) which can presumably be equated with cattle. There was also a single rabbit bone. This collection can certainly be interpreted as food waste, the absence of head and foot parts perhaps suggesting refuse from a kitchen or dining room. Some butchery was observed, related to jointing and defleshing using a heavy butchery implement (a cleaver). It is notable that all of these bones belong to adult individuals, most probably aged at least 2 to 3 years old, while the available measurements (limited to the sheep/goat collection) are indicative of animals comparable in size to those from contemporary assemblages taken from the Abbey and elsewhere in London (see Rielly in prep a).

Skeletal part:	scap	hum	rad	pel	tib	rib	lbf	Total
Species								
Cattle	1	3						4
Cattle-size						5	2	7
Sheep/Goat			3	1	5			9
Pig	1	1						2
Rabbit					1			1
Total	2	4	3	1	6	5	2	23

Table 1. Species and skeletal part distribution from context (2), where scap scapula, hum humerus, rad radius, pel pelvis, tib tibia and lbf is long bone fragment.

6.2 Conclusions and recommendations for further work

6.2.1 While in good condition and well dated, the quantity of bones is rather small. Thus it cannot be determined whether this collection is similar to other contemporary assemblages found within the Abbey, these for example generally showing a wealth of sheep/goat relative to cattle bones as well as notable high status indicators (Rielly in prep b). It is of interest nonetheless that this collection appears to derive from the Abbey kitchens, thus supplying a possible source for this material.

6.2.2 No further work can be recommended for this material, although of course the information contained in this report should be included in any future written work on this site.

6.3 References

Rielly, K, in prep.a “The animal bones,” in Teague, S & Fairman, E. *The Thameslink Project Monograph 2: Life in medieval and post-medieval Southwark*. PCA/Oxford Archaeology Monograph

Rielly, K, in prep.b “The animal bones.” in Jorgensen, P. *The Thameslink Project Monograph 2: Life in medieval and post-medieval Southwark*. PCA unpublished report.

7 APPENDIX 3: POTTERY REPORT

By Chris Jarrett, Pre-Construct Archaeology Limited

7.1 Pottery was recovered from a single context: [2]. The material is recorded as a total of three sherds, 3 estimated number of vessels (ENV) and weighed 107g. The pottery types are noted as two sherds of Surrey-Hampshire border whitewares, dated 1550-1700, This consists of a clear- or yellow-glazed ware (BORDO: 8g) small rounded jar (probably a tripod pipkin), with a rounded rim and internal lid-seating, while the exterior is corrugated and the base and foot of a an externally sooted tripod pipkin made in the olive-glazed ware (BORDO: 50g). Additionally, there is a sherd from a large, probable closed form, made in an unidentified ware (MISC: 47g). The sherd is high-fired, has pale yellow brown surfaces and a grey core. The fabric is fine with occasional large inclusions, including reddish brown quartzes. The pottery is most likely to date to the second half of the 16th century-first half of the 17th century as during the late 17th century the surfaces on the Surrey-Hampshire border pottery became plainer and items with corrugated surfaces are recorded less frequently (Pearce 1992).

7.2 The pottery has little significance and its main potential is to date the context it was recovered from. There are no recommendations for further work on the pottery.

7.3 Reference

Pearce, J. 1992. Border Wares, Post-Medieval Pottery in London, 1500-1700.Vol. 1, London HMSO.

8 APPENDIX 4: CERAMIC BUILDING MATERIAL REPORT

By Amparo Valcarcel, Pre-Construct Archaeology Limited

8.1 Quantification

Context	Fabric	Form	Size	Date range of material		Latest dated material		Spot date	Spot date with mortar
12	3039	Post medieval sandy red fabric (reused)	1	1450	1700	1450	1700	1550-1700+	No mortar

8.2 Review

- 8.2.1 One fragment of a sandy red brick paver was recovered from [12]. This item reflects the post medieval development of this site. No further work recommended.

PCA

PCA SOUTH

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